BEFORE
THE ILLINOIS COMMERCE COMMISSION

In the Matter of the Petition of Gallatin River Communication L.L.C. d/b/a CenturyLink for Arbitration of Interconnection Rates and Terms And Conditions with NTS Services Corp. Pursuant to Section 252(b)of The Telecommunications Act of 1996	))))))	Docket No. 11-0567

CONFIDENTIAL REBUTTAL TESTIMONY
OF
CHRISTY V. LONDERHOLM

ON BEHALF OF

GALLATIN RIVER COMMUNICATIONS L.L.C.

D/B/A

CENTURYLINK

EXHIBIT 3.1

JANUARY 20, 2012

TABLE OF CONTENTS

I. INTRODUCTION 3
II. PURPOSE AND SUMMARY OF REBUTTAL TESTIMONY 3
III. REBUTTAL TO DR. JAMES ZOLNIEREK 4
12,000 Foot Carrier Serving Area Design is the correct input 4
The Efficiencies in CenturyLink's Model 8
TELRIC rules on the existing network and using embedded costs 12
IV. REBUTTAL TO MR. SAMUEL MCCLERREN 23
Just and Reasonable 23
Density Analysis is not complete or accurate for comparison 26
Recommended Rates 31
V. REBUTTAL TO MR. FRED MIRI 33
Exaggerated Claims 33
Financial Analysis 34
Embedded Cost are explicitly excluded from TELRIC 37

I. INTRODUCTION

Q. Please state your name, business address, employer, and current position.

A. My name is Christy V. Londerholm. My business address is 5454 West 110th Street, Overland Park, Kansas 66211. I am employed as Director, Regulatory Operations for CenturyLink.

Q. Are you the same Christy V. Londerholm who filed direct testimony in this case?

A. Yes.

II. PURPOSE AND SUMMARY OF REBUTTAL TESTIMONY

Q. What is the purpose of your rebuttal testimony?

A. My rebuttal testimony addresses the concerns and issues in the Staff direct testimonies of Dr. James Zolnierek and Mr. Samuel McClerren. I also address the NTS Direct Testimony of Mr. Fred Miri.

Q. Please summarize your rebuttal testimony

A. I begin my rebuttal testimony by addressing Dr. Zolnierek's concerns.

1. I discuss why the 12,000 foot Carrier Serving Area ("CSA") design used by CenturyLink is the correct input for a TELRIC model.
2. I explain why Dr. Zolnierek's TELRIC application is not consistent with the FCC's TELRIC rules.
3. I reiterate the efficiencies in CenturyLink TELRIC results.

Relating to Mr. McClerren's direct testimony:

1. I explain that rate of return is not the standard for just and reasonable TELRIC rates.
2. I address his analysis of the comparison of Verizon and CenturyLink loop rates.
3. I address his three points that lead him to recommend $17.93 as a just and reasonable 2-wire loop rate.

Relating to Mr. Miri's direct testimony:

1. I show that Mr. Miri's testimony is fraught with exaggerated claims.
2. I show that NTS earns a healthy margin after paying CenturyLink's TELRIC rate.

III. REBUTTAL TO DR. JAMES ZOLNIEREK

12,000 Foot Carrier Serving Area Design is the correct input

Q. Dr. Zolnierek recommends the Commission find CenturyLink's TELRIC based cost estimates for two-wire loops to be inconsistent with the FCC's TELRIC rules. Can you summarize your understanding of Dr. Zolnierek's conclusion that CenturyLink's Economic Cost Model results in "…functionality, inclusion of incremental costs not attributable to the 2-Wire loops and the existing network.." (page 25, line 519) ?

A. Yes. I understand Dr. Zolnierek to conclude that the input value of 12,000 feet for the CSA design increases the functionality and cost of a 2-wire loop above

those allowed by the FCC. In addition, Dr. Zolnierek takes issue with the CenturyLink embedded existing network not having a 12,000 foot design for 100% of its loops.

Q. How do you respond to the input value of 12,000 feet for the CSA design?

A. First, a 12,000 foot CSA design by itself does not equate to increased incremental functionality or cost per unit. Each loop must have a physical path (cable and wire) from the customer location to the serving wire center. The cable and wire can be 100% copper, 100% fiber or a hybrid fiber/copper. The hybrid fiber/copper loop structure requires a DLC. The use of a DLC avoids the need for individual copper cable pairs from each customer premise all the way back to the central office; rather each customer's copper loop is aggregated at the DLC and transported to the central office via fiber thus creating a least-cost network design. The input value for the CSA design designates the longest distance the copper portion of the loop will be to any single customer. A shorter copper loop length only has increased functionality and cost once incremental electronics are added to the loop. Absent incremental electronics, there is no increased functionality and cost. CenturyLink did not include any additional electronics to increase functionality or cost of a 2-wire loop beyond that required by the FCC to provide voice grade loop functionality. Longer copper loop lengths can provide increased functionality as well if the proper electronics are added. So, the 12,000 foot CSA design does not in and of itself add increased functionality or cost.

Second and equally important, the FCC ordered 12,000 feet as the appropriate break point. In the section of its Virginia Arbitration Order on Engineering Standards for Copper Loop Lengths, the FCC states:

> "CSA guidelines expressly call for a copper/fiber break point at 12,000 feet, not 18,000 feet. The CSA guidelines, although flexible enough to permit some exceptions, are nonetheless the most recent guidelines for building outside plant and, therefore, ***represent the most appropriate design guidelines to be used in a TELRIC model (emphasis added).***"[1]

Third, as Dr. Zolnierek himself points out, the ICC accepted the 12,000 foot design in both dockets 02-0864 and 00-0812. Dr. Zolnierek is incorrect when he states that CenturyLink did not allocate any portion of DLC investments to data services.[2] As I discuss below, CenturyLink does allocate the DLC investment and to be clear, the 25% allocation ordered in 02-0864 was applied to DLC common equipment only. Dr. Zolnierek's rationale for applying a different standard to CenturyLink due to density differences with AT&T and a settled rate for Verizon should not convince this Commission that the 12,000 foot network design input

[1] *In the Matter of the Petition of WorldCom, Inc. Pursuant to Section 252(e)(5) of the Communications Act for Preemption of the Jurisdiction of the Virginia State Corporation Commission Regarding Interconnection Disputes with Verizon Virginia Inc., and for Expedited Arbitration In the Matter of Petition of AT&T Communications of Virginia, Inc., Pursuant to Section 252(e)(5) of the Communications Act for Preemption of the Jurisdiction of the Virginia Corporation Commission Regarding Interconnection Disputes with Verizon Virginia, Inc.*, 18 FCC Rcd 17722, ¶241 (Rel. August 29, 2003).
[2] Direct Testimony, Dr. James Zolnierek, page 22 line 470

fails to meet the required FCC standard for a TELRIC model.

Fourth, the 12,000 foot design meets the FCC requirement at 47 CFR §51.505(b)(1) that the model cost be of an efficient network configuration. Under the FCC TELRIC rules, an efficient network configuration should meet both "the most efficient telecommunications technology currently available and the lowest cost network configuration." The 12,000 foot CSA design shortens the copper in the network which results in lower unit costs while remaining true to the FCC's requirement for "the most efficient telecommunications technology currently available." The cost of making the copper portion of the loop longer (which is not as the FCC has ordered) is almost equivalent to increasing the number of DLCs as has been done in CenturyLink's cost model. Longer copper loops are a historical embedded concept. The cost to install cable is labor intensive and increases every year. As I explained in my direct testimony (Table 8, page 34), copper cable alone has increased an average of 7.8% each year over the last 5 years. The cost of copper cable has increased so much that copper thefts are a problem for many industries.

Therefore, the 12,000 foot CSA design is TELRIC compliant and provides a widely accepted efficient network configuration for the provision of 2-wire loops.

Q. Dr. Zolnierek points to the ABC Coalition plan as further evidence that the 12,000 foot design is not consistent with the TELRIC rules for 2-Wire Loop cost in that it allows for "..the loop structure necessary for ubiquitous broadband deployment." (page 10, row 223) Do you have a response?

A. Yes. Broadband can also be ubiquitous at 18,000 feet[3]. Again, it is the electronics added to the loop structure that increases functionality to more robust broadband. The ABC Coalition Plan was addressing a 4 Mbps broadband speed requested by the FCC. And as Dr. Zolnierek points out, the request for higher bandwidth comes with increased costs. The CenturyLink Economic Cost Model used for determining the 2-wire UNE loop costs in this arbitration did not include any incremental electronics to allow for broadband. Broadband is not a functionality required by the FCC in defining the 2-wire loop element.

The Efficiencies in CenturyLink's Model

Q. Are all loops in CenturyLink's model designed to connect to a DLC?

A. No. [Begin Confidential] xxxx xxx [End Confidential] of the model loops are outside of 12,000 feet from the wire center office and hence require a DLC for functionality. The remaining [Begin Confidential] xxx [End Confidential] of the model loops are within 12,000 feet of the wire center office and are connected on copper only to the wire center.

Q. Dr. Zolnierek takes issue with the number of DLCs and the customer count attached to the DLCs. Can you respond?

A. Yes. In a 12,000 foot CSA model design, all customers that cannot be connected to a service device within the wire center itself will be served from a DLC placed

[3] http://www.atis.org/peg/docs/peg2000/gallo2.pdf, page 5; http://portal.calix.com/data/Calix_TheBookOnVideo.pdf, figure 17, page 38 ; or any number of internet searches

in the outside plant (OSP). The model design does not de-select certain customers from the model design criteria. As I address below, even if such an arbitrary de-selection process was followed, it would not change the unit cost of the 2-wire UNE loop in any significant way. Notably, in Docket No. 00-0812, Mr. Koch of the ICC Staff testified that he did not take issue with the 12,000 foot design for Verizon because the variation in the UNE loop costs between 12,000 foot and 18,000 foot network design is not significant[4]. CenturyLink's model results are no different. CenturyLink's model performs an iterative process to ensure an optimally placed DLC to capture as many customers as possible within the CSA input design, 12,000 foot in this instance. The model also performs an iterative process to ensure the shortest distance on the fiber portion of the network from the DLC aggregation point to the wire center office, an efficiency that overcomes any additional electronics cost.

Q. Do the number of DLCs placed by the model versus the number of DLCs in CenturyLink's existing network have any relevance[5]?

A. No, not at all. The relevant question is whether the network design meets the FCC standard? The FCC states:

> "The total element long-run incremental cost of an element should be **measured based on the use of the most efficient telecommunications technology currently available and the lowest cost network**

[4] Illinois Commerce Commission Order in Docket 00-0812, dated May 3, 2006, page 9.
[5] Direct Testimony, Dr. James Zolneirek, page 16

configuration, given the existing location of the incumbent LEC's wire centers."[6]

The cost the FCC refers to is the final unit cost of the element. The network configuration, i.e., the design of the cable and electronics, should produce the lowest unit cost while also having the most efficient telecommunication technology. As I stated above, the FCC found the 12,000 foot design to "..represent the most appropriate design guidelines to be used in a TELRIC model."

Q. Have you evaluated Staff's concerns about the TELRIC of the 2-wire Band 1 UNE loop as it relates to the DLCs?

A. Yes. I ran two analyses. [Begin Confidential]xx xxx xxxxx xxxxxxxx, x xxxx xxxxxx xxxx xxxxx xxxxx xxx xxx xxx xxxxxx. xxx xxxx xxxxxx xxx xxx xx xxx xxxx x xxxx xx xxxxx xxxxxxxx xx x xxxxxx xxxx x xxxx xxxx.

xx xxx xxxxxx xxxxxxxx, xxxxx xxx xxxxxx xxxx xxx xxxxxx xxxxx, x xxxxxxx xxx xxx xxx xxxxxxxxxx xxx xxxxx xxxx xxxx xxxx xxx xxx x xxxxx xxxxxxx xxx xxx. x xxx xxx xxx xxxx xxx xxxxxxxxx xxxxxxxxxx xx xxxxxxxx xxxx xxx xxxx xxxxxxxxxx xx xxxx xxx xxx xxxxxxxxxx xx x xxxx xxxxxxxxxx xxx xxxxxxxxxx xxx xxxxxxxxxx xxxx. xxx xxxxxxx xxxx xxx xxxxxx xxxx x xxxxxx. [End Confidential]

[6] 47 C.F.R §51.505(b)(1)

Q. You stated above that CenturyLink's model methodology does perform allocations for the DLC investment and accounts for the correct application of the 25% allocation Dr. Zolnierek refers to regarding Docket 02-0864. Did you perform an analysis of the Docket 02-0864 Order and its impact on the CenturyLink Model results?

A. Yes. [Begin Confidential] xxxxx xxxxxxxxxxxxx xxxxx xxxxxxxxxxx xxxxxxx xxxxxxxx xx xxxxxxxxxx xxxxxxxx x xxxxxxxxxx xxxx xxxxxxx xxxx xxx xxxxxxxxx xx xxxxxx xxxx xxx xx xxx xxxxxx xxx xxxxxxxxx xxxxxxxxxx xx xxx xxxx xx xxx xxxxxx xxx xxxxxxxxxx. xxx xxxxx xxxxxxxxxxx xxxxxxxxxx xxx xxxxx xxxxx xxx xxxxxxxx xx xxx[7]. xxx xxxxxx xxxxxxxxx xxxxxxx xx xxx. x xxxxxxx xxx xxx xxxxxxxxxxx xxx xxxxxx xxx xxxxx xx xxx xx xxxxxx xxx xxxxxx xxxxxxxxxx xxxx xx xxxx xxxx xxx[8]. xxx xxxxxxxxx xxxx x xxxx xxxx xx xxxxxx. [End Confidential].

Q. On page 17, line 365 of his Direct Testimony, Dr. Zolnierek claims a single DLC cost of [Begin Confidential] xxxxxxx [End Confidential] Is this the correct interpretation of the DLC cost?

A. No. The two columns Dr. Zolnierek added together are independent of each other and do not represent the cost of a single DLC. The correct interpretation of the cost of a single DLC is approximately half that number.

---

[7] Staff DR JZ 1.01, file 2010 v2.01.1 Inputs.xls, tab Loop, row 36

[8] Staff DR JZ 1.01, file 2010 v2.01.1 LoopSummary.xls, tab 2wireLoopCost, column P *1-reduction %

Q. Dr. Zolnierek states that CenturyLink's model is designed to encompass "more than the existing customer base." (page 20, line 425) Is this an accurate statement?

A. No. The model starts with existing customer locations and builds from there. It does not design plant for customers that are no longer on the network nor does it attempt to design for customers that may come onto the network in the future. Dr. Zolnierek may be taking issue with the manufactured cable sizes that do not allow for perfect pair sizing to the line count. The cable sizes are a step function. For example, if there are 52 pairs needed to serve the customers, the manufactured cable size to meet the 52 pairs is a 100 pair cable thus creating 48 additional pairs. This is a function of the manufactured cable size and not a deficiency in the model design.

TELRIC rules on the existing network and using embedded costs

Q. Can you explain your understanding of Dr. Zolnierek's position on the existing embedded network and CenturyLink model network?

A. Yes. I understand Dr Zolnierek to conclude that CenturyLink's model can only include increased functionality to the extent its existing network has that increased functionality. And as I stated above, I understand he equates increased model network design functionality (in the form of broadband capable loops) to a 12,000 foot loop design. In particular I refer to 3 sentences in Dr Zolnierek's

testimony that clarify his position on the requirements that CenturyLink must meet to satisfy his understanding of the FCC rules. Page 9, line 196

> "The two wire loops included within CenturyLink's cost model contain functionalities, and thus costs, that are not directly attributable to or reasonably incremental to such elements."

And page 11, line 236

> "To the extent that CenturyLink's existing loop network does not provide for ubiquitous broadband functionality to all customers within Illinois, the higher bandwidth functionality included in the modeled configuration is not a functionality that is attributable or reasonably incremental to all of the two-wire loops that CenturyLink will be providing as UNEs."

And on page 19, line 395

> "To the extent that broadband capability is not a functionality inherent in all of CenturyLink's loops, this cost is, in my opinion, inconsistent with the FCC's TELRIC rules."

I understand from Dr. Zolnierek's direct testimony that he concludes the input for a 12,000 foot design brings increased functionality and costs to CenturyLink's model network. As a model, each loop is designed the same and hence the model network would be ubiquitous in this increased functionality. And since CenturyLink's existing network does not have this ubiquity, Dr Zolnierek concludes the 2-wire loops CenturyLink will provide as a UNE do not equate to the 2-wire loop costs produced by the model.

Q. Dr. Zolnierek emphasizes a portion of the sentence he quotes in his testimony. Should that portion be construed to mean the model underlying the TELRIC of an element should be based upon embedded existing plant or the LEC's retail services?

A. No. The specific portion that Dr. Zolnierek emphasized is "…if it built a local network that could provide all the services its current network provides..." Notwithstanding the quoted phrase, the FCC could not be clearer about the design criteria of the network. The FCC states embedded costs have no place in the TELRIC of an element. The services of the current network are those provisioned over the FCC defined elements. CenturyLink includes all the services its current network provides for those elements including 2-wire loop, DS1 loops, DS3 loops and transport facilities.

Q. Should the model to determine the TELRIC of the loop element encompass the embedded existing network design and existing retail service offerings to meet the FCC requirements for an efficient network configuration and least cost technology?

A. No. The only existing portions of the network to be used in a TELRIC cost study are the locations of the LEC's wire centers.[9] Outside of wire centers, the network is totally replaced and reconfigured to reach the customer locations for the UNE loops. Dr. Zolnierek's use of existing loop plant as a basis for the model is contrary to the FCC's directions. The FCC is clear that with the exception of the

[9] 47 CFR §51.505

location of the LEC's wire centers, the model is not to be based on the existing network. The FCC specifically chose this methodology over an embedded existing view:

> "Forward-looking cost methodologies, like TELRIC, are intended to consider the costs that a carrier would incur in the future. Thus, a question arises whether costs should be computed based on the least-cost, most efficient network configuration and technology currently available, or whether forward-looking cost should be computed based on incumbent LECs' existing network infrastructures, taking into account changes in depreciation and inflation."[10]

The FCC rejected the "..existing network infrastructure..." in favor of the "...most efficient network configuration..." Therefore, the number of DLCs or the CenturyLink retail services available over the existing network are not relevant.

Q. Do the services have some relevance in the determining the TELRIC of the 2-wire loop element?

A. Yes. The FCC has defined the services that a 2-wire UNE loop must be able to perform (i.e., the functionality) and, therefore, the costs to be included for this element. The definition includes services for a copper only loop and a copper/fiber hybrid loop. The copper loop must be free of all encumbrances to

[10] First Report and Order, *In the Matter of the Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, 11 FCC Rcd 15499, ¶683 (Rel. Aug. 8, 1996)) ("*First Report and Order*").

allow the CLEC to provision broadband (that is, a broadband capable loop) but should not be a broadband provisioned loop. The broadband capability comes from the CLEC's investment in electronics equipment to allow broadband. CenturyLink's model does not include any cost for encumbrances such as repeaters or bridge taps (i.e., the model results in lower costs.) The copper/fiber hybrid loop requires TDM functionality which is the only cost included in CenturyLink's model.

Q. Does the TELRIC of a 2-wire UNE loop resulting from CenturyLink's model include the cost for broadband?

A. No. But Dr. Zolnierek appears to believe otherwise due to the input value for a 12,000 foot network design. As I stated before, electronics are needed to make the loop broadband capable. CenturyLink's model results do not include such electronics. However, since NTS provisions almost exclusively DSL or broadband service, they clearly have been able to provide higher bandwidth services to their customers by adding their own electronics. The FCC is clear that DSLAMs (necessary for broadband DSL) are not to be included in the model determining TELRIC.[11] DLSAMs are a physical piece of network that often

[11] Third Report and Order and Fourth Further Notice of Proposed Rulemaking, *In the Matter of Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, 15 FCC Rcd 3696, ¶167 (Rel. Nov. 5, 1999)(subsequent history omitted):

> "We modify the definition of the loop network element to include all features, functions, and capabilities of the transmission facilities, including dark fiber and attached electronics (except those used for the provision of advanced services,

resides inside the DLC. CenturyLink's model does not include the DSLAM investment nor does it size a DLC common cabinet so as to allow for the insertion of a DSLAM. So to be clear, with the objective of determining the TELRIC of a unit element called the 2-wire loop, CenturyLink's model does not include costs outside of those required to meet the FCC definition. To do so, would be inefficient and without value. It would require designing the network and developing inputs for costs that must be eliminated to meet the FCC requirements. In other words, it would require great effort to add in costs only to take them back out.

Q. Does Dr. Zolnierek support using embedded costs as the basis for the TELRIC of a 2-wire UNE loop?

A. Yes, as I understand his testimony. On page 18, he recognizes that cable costs, in addition to DLC electronics are part of the overall plant for the loop element.

> "Furthermore, it is not strictly the DLC electronics costs associated with the 12,000 feet engineering criteria that increase costs in the model. "

The "…increased costs in the model" he refers to are based on a comparison to embedded costs[12]. [Begin Confidential] xxx xxxxxxxxx xxx xxxx xx x xxxx xx xxxxx xxxxx xxxxxxxxxxxxxxx xxxx xxxxxx xxxxxxxx xxxxx xxx xxxxxxxxx xxxx xx xx xxx xxxxxxxxx xxxxx xxxx xxx xxxxxx xxxx xxxxxx xxxxxxxx xxxx

such as DSLAMs) owned by the incumbent LEC, between an incumbent LEC's central office and the loop demarcation point at the customer premises…"

[12] Although Dr. Zolnierek refers to the "existing model" several times in this portion of his testimony, I understand him to be referring to the existing embedded network.

xxxxxx. xxxxx xx xx x xxxx xxxx xxxxxx xxxxx xxxxxxxxxxx xxxxxxxxx xxxx xxx xxx xx xxxxx xxxxxxxx xxxxx xxx xxxxx xxxxxxxxxxx xxxxx xxxx xxxxx xxxxx xx xxx xxxxxxxxxxxxxxxx xxx xxxxx xx xxxxxxxxx xxx xxxxxx xx x. xxxx xxxxxxxxxxx xxx xxxxxxxxxxx xxxx xxx xxxxxx xx xxxxx xxxxx xxxxx xxxxx xx xxxxxxxxxxx xx xxx xxxxxxx xxxx xxxx xxxxxxxx xx xxx xxxxxxx xxxxxx xxx xxxxx xxxx xxxxxxxxx xx xxxxxx xxxx xx.)[13] [End Confidential]

It is the holistic model (network configuration, investment cost, maintenance costs resulting in unit element cost) that the TELRIC of a loop element rate is based upon. A TELRIC model uses current prices for cable, equipment and the placing of outside plant. The model would not be forward-looking if the embedded cost of cable and its placement were used as inputs. Also, FCC Rule 51.505(d)(1) excludes the use of embedded cost in calculating the forward-looking cost for TELRIC. It is the combination of the investment and ongoing maintenance that allows me to state "lower cost fiber cable vs. higher cost embedded copper cable" in contrast to Dr. Zolnierek's analysis of sheath feet only.[14]

Q. Dr. Zolnierek takes issue with your direct testimony in comparing sheath foot distances between embedded and modeled in Table 6. Was there anything "misleading" in your testimony[15]?

A. No. I believe I am clear in that section of my testimony. The emphasis is on efficiencies of the reconfigured network that drives lower sheath foot costs than

[13] Staff DR JZ 1.01, file 2010 v2.01.1 Inputs.xls, tab Main_Factors
[14] Direct Testimony, Dr James Zolnierek, page 18 lines 385-390
[15] Direct Testimony, Dr James Zolnierek, page 19 lines 403

embedded cost. The investment savings from such efficiencies is significant and identifying this fact was not misleading. Distances are critical in determining costs since installed cable is a per foot cost factor. I held the cost per foot constant in my formula to demonstrate just how significant this distance impact could be. The cost per foot must be held constant in the analysis to determine a dollar savings associated strictly with the sheath distance. The distance efficiencies are not a product of moving customer locations nor of customer loss since CenturyLink must still extend loops to reach customers out to the farthest points. Rather the reduction of cable sheath feet over the embedded network is strictly a function of the 20/20 hindsight of the model methodology and the minimum spanning tree logic to produce the shortest distances using actual road networks.[16]

Q. Referring to Table 6 and Dr. Zolnierek's testimony on page 20 [Begin Confidential] "...xxxx xxxxx xxx xxxxxxxx xxxx xxx xxxxxx xxxx xxxxxxx xx xxxxxxxxx xxxx xxxxxxx xxx xxxxxxx xx xxxx xxx," [End Confidential], is his percentage accurate?

A. No. As Table 1 below shows, using the embedded sheath cost (counter to the FCC guidelines on TELRIC costs), the investment savings due to the model efficiencies would be [Begin Confidential] xxx xxx xxx. xxxxx, x xxx xxx xxxxxxxxx xxx xxxxxx xx xx xxxxxxxxx xxxx xxxxxxx. Xxxxxx xx xx xxxxxxx

[16] Direct Testimony, Christy Londerholm, Exhibit 2.1, page 10

xx xxxxxxxxxxx xxxxxxx xx xxxxx xxxxxxxx x xxx xx xxxx xxxx xxxxxxxxxx xxxxxxxxxxx xxx xxxxxxxx xxxxxxxxxxxx.

Confidential Information Redacted

[End Confidential]

His percentage reduction is inaccurate but still makes the point I made in my direct testimony. A substantial savings (at least to CenturyLink) is due to the sheath foot reduction produced by CenturyLink's reconfigured network design. As I address below, the higher per foot sheath cost is not due to the additional fiber a 12,000 CSA design requires. Rather, it is due to the real-world issue of cost increases.

Q. In comparing the embedded cost per sheath foot and the model results per sheath foot, the embedded cost is lower. Is this a function of technology as asserted by Dr. Zolnierek?

A. No. The model uses forward-looking costs as required by the FCC. The cost to install cable is reliant on labor and heavy machinery. These costs increase annually as I stated in my direct testimony. The embedded installed costs are an average spanning many historic years. As I stated above, the additional fiber investment in the model network does not result in higher 2-wire UNE loop element rates. The results of the 18,000 foot run I processed demonstrate this point further. Copper cable, as a stand-alone component of the network, results in higher unit monthly recurring costs. [Begin Confidential] xxxxxxxxx xx xxxxxx xx xxxxxxxxxx xxxx xxx xxxxx xxxxxxxxxxxx xx xxxxxx xxxxxxx xxxxxxx xx xxxxx xxxxx xxxxxxxxxx xxxxxxxx xx xxxxxxxx xxxxxxxxxx xxxx xxxx xxx xxxxxxxxxxxxxxx xxxxxxxx xxxx xxxxx xxxxxx xxxx xxxxxx xxxxxxxx.[17] [End Confidential]

Q. Can CenturyLink place a sheath of cable at the embedded per sheath cost which is averaged over 10-15 years?

A. No. In my direct testimony, I reconciled the embedded cost to place cable to the forward-looking cost of placing cable as required. The FCC is clear that the cost is one that a competitor would have in building the network today. The cost is to be forward looking , not based on embedded book cost. Determining the final

[17] Direct Testimony, Christy Londerholm, Table 7, page 34

TELRIC of the 2-wire UNE loop costs does not allow for cost input values that are reflective of bygone historic times when labor cost was lower as were copper cable costs. It is a 2 part process – an efficient network design overlaid with forward-looking costs. Dr Zolnierek appears to appreciate the sheath foot reduction from the model compared to the embedded but he misses the FCC requirement on the cost part of the process.

Q. Dr. Zolnierek testifies that CenturyLink is not compliant with 47 CFR § 51.505(e)(2) since CenturyLink did not enter the cost study into the record. How do you respond?

A. It is my understanding that testimony does not become part of the record until the hearing. CenturyLink produced the cost model to the parties this past summer. So that there is technical compliance with the FCC's rules, attached as Exhibit 3.2 is an electronic copy of the cost study that CenturyLink will seek to introduce into the record at hearing.

Q. Dr. Zolnierek testifies that CenturyLink is not compliant with 47 CFR §51.505(b) as it pertains to two wire loops. How do you respond?

A. First, since Dr Zolnierek specifically did not include the DS1 loops as non-compliant in his testimony, I can only conclude he agrees those are compliant. Second, since his opinion on non-compliance with the two-wire loops was directly attributable to the input value of a 12,000 foot CSA design, I respectfully

disagree and submit that I have adequately addressed his concerns through my testimony above.

Q. Do Dr. Zolnierek and you agree on some aspects of 2-wire UNE costs?

A. Yes. I understand that we agree that for each 2-Wire UNE Loop CenturyLink provisions to NTS or any CLEC, the element should function as the FCC has defined and that the rate should equal the forward-looking economic unit cost as the FCC has specified. Dr. Zolnierek's position appears to be that CenturyLink should include investment cost for equipment such as DSLAMs to acknowledge that CenturyLink provides such service (DSL) to its own retail customers only to allocate away those costs so that they are not included in the forward-looking economic unit cost. This is where we disagree.

IV. REBUTTAL TO MR. SAMUEL MCCLERREN

Just and Reasonable

Q. Stated on page 2 of his direct testimony, the purpose of Mr. McClerren's testimony is to determine if the costs produced by CenturyLink's model appear to be just and reasonable. Did he explain the standard by which he analyzed the appearance of just and reasonable rates?

A. No. However the 1996 Act is clear on how it should be approached:

> Section 252(d)(1) states that determinations by a state commission of the just and reasonable rate for interconnection pursuant to section 251(c)(2) and network elements pursuant to section 251(c)(3) shall be: (1) based on the cost determined without reference to a rate-of-

> return proceeding; (2) nondiscriminatory; and (3) may include a reasonable profit. 47 U.S.C. § 252(d)(1)

The FCC set the TELRIC standard as the just and reasonable rate standard.[18]

Q. How does Mr. McClerren approach the just and reasonableness of CenturyLink's TELRIC rates[19]?

A. Mr. McClerren incorrectly applies a rate of return standard in testing the appearance of just and reasonableness. On page 4, he questions if the current rates allow a reasonable return. On page 6, he states that he has no reason to believe that Verizon's rates were inadequate for it to receive a reasonable return.

Q. Does rate of return have any relevance in this arbitration proceeding?

A. No, yet it appears to be the standard by which Mr. McClerren determines just and reasonable for UNE rates. In setting UNE rates, the FCC has determined that TELRIC is the standard for determining unit costs. Importantly, as I have stated above, embedded cost is not to be considered and rate of return is all about embedded books. Paragraph 51 of the FCC's *Triennial Review Remand Order* quotes the Supreme Court around this issue:

> "Indeed the Supreme Court has emphasized that Congress's passage of the Act represented "an explicit disavowal of the familiar public-utility model of

[18] *First Report and Order*, ¶740("The just and reasonable rate standard of TELRIC plus a reasonable allocation of the joint and common costs of providing network elements that we are adopting attempts to replicate, with respect to bottleneck monopoly elements, the rates that would be charged in a competitive market.")
[19] Direct Testimony of Samuel McClerren, page 2, line 37 - 38

rate regulation ... in favor of novel ratesetting designed to give aspiring competitors every possible incentive to enter local retail telephone markets, short of confiscating the incumbents' property."[20]

Q. On page 3 of his testimony, Mr. McClerren states CenturyLink is proposing a 50% rate increase. On page 4 of his testimony, he makes more comparisons to the "...current CenturyLink rate..." Does the current NTS price for a 2-wire loop have any comparative value to the TELRIC $26.85 2-wire UNE loop rate?

A. No. The $26.85 is CenturyLink's cost, using the FCC TELRIC rules, for the network plant necessary to provide a 2-wire loop meeting the FCC's definition for a 2-wire UNE Loop. This is an important nuance as the existing rate has no basis in cost. The $17.93 has no relevance in determining the 2-wire UNE loop rate that is at issue in this arbitration. As discussed in detail in the Rebuttal Testimony of CenturyLink's witness Mr. Guy Miller, the objective in this arbitration is to resolve the remaining issues which have been narrowed down to the Band 1 2-wire and DS-1 UNE loop rates. This unit rate is to be determined using forward-looking economic cost which CenturyLink has endeavored to determine in this arbitration.

[20] Order on Remand, *In the Matter of Unbundled Access to Network Elements; Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, 20 FCC Rcd 2533, ¶51 (Rel. February 4, 2005)(subsequent history omitted).

Q. On page 5 of his testimony, Mr. McClerren makes an observation about costs and concludes he is "...unaware of strong upward or downward cost pressures relative to 2-wire loop or DS1 Loop services since 2006." Can you respond?

A. Yes. Mr. McClerren seems to be confusing price and cost. These are two very distinct concepts. Generally, cost does not have to equal price and the terms are used differently depending on which side of the transaction is being considered. For example, a store runs a sale in week 1 for product 1, in week 2 the **cost** for product 1 is likely to be no different from week 1. The price is certainly different but not the cost. Costs for telecommunication infrastructure have definitely increased since 2006. Two main factors have contributed to increasing loop unit costs: 1) increases in material and placing costs; and 2) decreased loop counts, which decrease economies of scale for loops.

Density Analysis is not complete or accurate for comparison

Q. When relying upon his density comparison, Mr. McClerren concludes that CenturyLink's rates should be lower than Verizon's rates. Do you agree with his analysis?

A. No. First, the "cost" that Verizon put forward (which took 6 years to settle) were based upon the year 2000 vintage data. As the TPI index I included in my direct testimony demonstrates, costs have increased over the last 10 years. Simply using the $21.31 Verizon rate and indexing to a view of forward-looking cost (FCC standard for cost) results in a cost today of $30.28.

Second, the density numbers I included in my direct testimony were a statewide average density. The rates being compared are Band 1 not statewide. Verizon has 185 wire centers in their Band 1 while CenturyLink has 4 wire centers. I would agree that given the same density and distance dynamics at a wire center level, the costs would not vary much. However, when weighting 185 wire centers to a single Band 1 rate and when weighting 4 wire centers to a single Band 1 rate, I would not expect the costs, based upon density alone, to have much relevance in comparison. Below, I bring more clarity to the issue with the data available to me.

Q. On page 7 of his direct testimony, Mr. McClerren states the higher the loop density per square mile, the shorter the average loop length will be. Do you agree with his conclusion?

A. No. As I stated in my direct testimony, loop density is one of the largest factors affecting costs. Another major factor is the average loop length which is related to customer dispersion in the wire center, meaning if the customers are all spread evenly throughout the wire center, the average loop length will be greater than if they are clustered about the center of the wire center. Higher loop density is not related to shorter loop length as Mr. McClerren concludes. Other factors that drive increased costs along with loop density include loop length and total area to be served. These 2 factors determine the amount of cable investment required to serve all the loops in the wire center. Table 2 below provides the plant statistics for CenturyLink's 2-wire, Band 1 loops and demonstrates this point. [Begin

Confidential] x xxxxxx xxx xxxxxxxxx xxxx xxxxxxxxxx xxxxx xxxxx xxx xxxxxxxxx xxxx xxxxxxx xx xxxx xxxx xxxx x xxxxxx. xxxxxxx, xxxxxxxxxxx xxxxxx xx xxx xxxxxxx xxx xxxxxx xx xxxx xxxx xxxx xxxx xx xx xxxxx xxxxx xxxxxx. xxxxx xx xxxx xxxxx xxxxx xxxxxxxxxxxx xxxxxxx xxxxxxx xxx xxxx xxxx. xxxxxx xxxxx xxxx xxx xxxxxxxxx xxxxxxx xx xxxxx x xxx xxxxxxx. xx xxxxxx xx xxxx xx xxxxxxxx xxxx xxxxxxxx xxxxxxx xxxxx xxxxxx xx xxxx xxxx xxxxx xx xxxxx xx xxx xxxx xxxxxxx.

Table 2

IL UNE Model Statistics	N. Pekin	Galesburg	Pekin	Dixon	IL Band 1
Monthly 2-wire Costs	$ xx.xx	$ xx.xx	$ xx.	$ xx.xx	$ xx.xx
Density - (lines / sq. mi.)	xxx	xx	xxx	xx	xxx
Area (sq. mi.)	x.x	xxx.	xx.x	xxx.x	xxx.x
Total Voice Grade Lines	xxxxx	xxxxxx	xxxxxx	xxxxx	xxxxxx
Working Loops Behind DLCs	xxx	xxxxx	xxxxx	xxxxx	xxxxxx
Percent Lines behind DLCs	xx	xxx	xxx	xxx	xxx
Average Loop Length	xxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Maximum Loop Length	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Number of CSAs	x	xx	xx	xx	xx
Number of DLC Served CSAs	x	xx	xx	xx	xx

End Confidential]

Therefore, it can be seen from the table above that the four wire centers that compose CenturyLink Band 1 vary greatly in density, average loop length, and geographic area. One cannot compare loop bands between companies without

reviewing the individual wire center characteristics to determine similarities or disparities. The characteristics of a single wire center, which has outlier characteristics, can skew the weighted average.

Q. Mr. McClerren states that due to its density CenturyLink's territory has over 70% more loops per square mile than Verizon's service territory. Is this accurate?

A. Mathematically speaking, yes, but as I demonstrated above it is an oversimplification of customer dispersion. Within a populated mile comparison, the 70% would not stand. In a square mile, CenturyLink's 48 customers could all be located out to the very edge from the central office while Verizon's 28 customers could be dispersed within close proximity of the central office. Verizon's cost could be the same or lower since the loop distance would be ½ of CenturyLink's. If AT&T's density was compared to Verizon's density in this way, it would suggest that AT&T's territory has 1,867% more loops per square mile than Verizon. If cost and density related to each other in a linear way, it would suggest that AT&T should pay a CLEC for a UNE loop rather than charge a rate for the UNE loop ($21.31 – (1,867%*$21.31) = $-376.55.) This illustrates the skewing that can take place by not delving deep enough into all the attributes that influence costs, in particular, loop distance. Mr. McClerren does not challenge my direct testimony[21] where I state that "[a]s distance increases, the need for and the overall cost of, maintenance generally increases. Assuming

[21] Page 38, Direct Testimony, Christy V. Londerholm

565 constant customer density, longer cables have more splice points resulting in
566 greater exposure to risk…"
567
568 **Q. Mr. McClerren takes issue with your comparison of Band 1 rates in other**
569 **jurisdictions since it did not include the density, geographic data, and other**
570 **regulatory requirements[22]? Can you respond?**
571 A. Yes. I have expanded Table 13 from my direct testimony by adding the Band 1-
572 2-wire model results and adding a column for density. The density for
573 CenturyLink Illinois Band 1 wire centers are in line with the densities for the
574 other states' results and demonstrate, within this context, the just and
575 reasonableness of CenturyLink's 2-wire Band 1 for Illinois. Included as Exhibit
576 3.3 are the geographical characteristics underlying the model results for each wire
577 center included in CenturyLink Illinois Band 1 as well for comparison. I would
578 not expect rates to vary based on state regulatory requirements since the
579 regulatory requirements for the TELRIC unit cost for 2-wire UNE loop are set by
580 the FCC.
581 [Begin Confidential

[22] Direct Testimony, Samuel McClerren, page94, line 163-171.

Confidential Information Redacted

582

583 End Confidential]

584

585 **Recommended Rates**

586 **Q. Did Mr. McClerren conclude that the costs produced by CenturyLink's**
587 **model are not just and not reasonable?**

588 A. No. Mr. McClerren does many comparisons but nowhere in his testimony does
589 he conclude that the costs produced by CenturyLink's model are not just and
590 reasonable. He opines on whether other comparative prices include a reasonable
591 rate-of-return. However, this is not a rate-of-return proceeding and as Congress
592 clearly directed it is not intended to be so.

593

594 **Q. Mr. McClerren ultimately recommends the current non-TELRIC[23] $17.93**
595 **rate as just and reasonable and gives 3 points of rationale.[24] Can you**
596 **respond?**

[23] Direct Testimony, Samuel McClerren, page 4, line 73-74.
[24] Direct Testimony, Samuel McClerren, page 11, lines 210-216.

A. Yes. His first rationale is that the $17.93 rate is the current rate. As I discuss above this is not relevant to setting CenturyLink's current TELRIC unit cost for the 2-wire UNE at issue. As discussed by CenturyLink's witness Mr. Guy Miller this does not meet the FCC requirement for setting UNE rates.

For his second rationale, he draws upon his observations on whether or not there is "…strong upward pressure on 2-wire Loop rates since 2006." I addressed this earlier but reiterate my concern that Mr. McClerren may not be applying the terms price and cost correctly in this arbitration or to the TELRIC standard. In the earlier instance in his testimony he referred to "…upward or downward ***cost*** pressures…" (emphasis added) In this instance he refers to "...upward ***price*** pressures…" (emphasis added). The two are very different.

His last rationale is that the Verizon loop density is less than CenturyLink's. As I addressed above, determining whether a Band 1 loop cost should be higher or lower strictly on density comparison (which Mr. McClerren does) is much too simplistic.

Q. Mr. McClerren recommends two possible DS1 Band 1 loop rates. Do you agree with his recommendation and rationale?

A. No. His process of elimination is not what the FCC sets as the standard for determining the TELRIC unit costs of a UNE loop. Moreover, it is difficult to understand why the pick and choose rationale of a just and reasonable 2-wire loop is different from a DS1 loop. CenturyLink endeavored to follow the FCC rules for producing forward-looking economic costs meeting the TELRIC standard.

With all due respect to Mr. McClerren, the Commission should give deference to the FCC requirements rather than a middle ground type approach.

Q. In your Direct Testimony, you stated there were 6 rates across 2 elements for the Commission to decide. However, Mr. McClerren only recommends 2 rates across 2 elements. Can you explain?

A. Yes. As Mr McClerren points out in his direct testimony[25], NTS, in their response and direct testimony only addressed 2 rates across 2 elements. Therefore, the remaining 4 rates across these 2 elements are understood to be settled.

V. REBUTTAL TO MR. FRED MIRI

Exaggerated Claims

Q. Mr. Miri's Direct Testimony asserts that invoice amounts will increase by 100%if CenturyLink's TELRIC rates are adopted.[26] Is he correct?

A. No. Mr. Miri has no basis for making this assertion. In discovery, CenturyLink requested his analysis as to how he arrived at 100%. The response CenturyLink received was that Mr. Miri had done no analysis to reach this assertion. However NTS agreed to perform the analysis. In the supplemental response provided to CenturyLink that included the new analysis, it was clear the 100% was incorrect and exaggerated.

[25] Direct Testimony, Samuel McClerren, page 2 footnote 1
[26] Direct Testimony, Fred Miri, unnumbered page 6, NTS Response, page 4

641

642 **Q. Mr. Miri makes the statement that the ACFs in CenturyLink's model**
643 **"...appear much higher..." than he has seen and developed in other cost**
644 **studies. Could he provide any support for that statement?**
645 A. No. In fact in response to CenturyLink's data request, he claimed it was simply an
646 opinion. Although he testifies to have "developed" ACFs, he was unable to
647 produce a single calculation or data point of his work or what he has analyzed.
648 Again, Mr. Miri makes unsupported testaments.

649

650 **Q. Mr. Miri testifies that the impact of the CenturyLink TELRIC unit costs**
651 **applied retroactively and prospectively would be "catastrophic" and he**
652 **testifies it would require "dramatically raising customers' rates"[27]. Can you**
653 **respond?**
654 A. Yes. I am unsure how Mr. Miri defines "catastrophic" or "dramatic increases"
655 CenturyLink requested the financial information that allowed Mr. Miri to reach
656 this conclusion. NTS stated that no such information existed.

657

658 **Financial Analysis**

659 **Q. Were you able to get any financial information from NTS to analyze any**
660 **potential "catastrophic" impact or the need for "dramatic rate increases"??**
661 A. Yes. We requested the AR13 Report which NTS must file with the Illinois
662 Commission and which requires a Verification of Oath. However, NTS blanked

[27] Direct Testimony, Fred Miri, Unnumbered page 6

out Total Illinois Operating Revenue and Operating Illinois Income. The response did include the Total Illinois Operating Expenses, Total Illinois Communications Plant and Illinois Depreciation and Amortization[28]. In short, NTS has withheld all information that could be used to evaluate Mr. Miri's assertions.

Q. Were you able to make any analysis using the AR13 Report?

A. Yes. First, since NTS prefers to hide its revenue and net income, I can only conclude it is because they cannot support Mr. Miri's testimony. Second, I would note that CenturyLink's percent of NTS's Total Operating Expenses for 2010 is [Begin Confidential] xxxx xxx. [End Confidential]

Q. Do you have other data that contradicts Mr. Miri's unsupported testimony?

A. Yes. I turn to CenturyLink's own Illinois Annual Reports. [Begin Confidential] xxxxxxxxxxxx xxxxxxx xxxxxxx xxxxxxx xxxxxxx xxx xxxx xx xxx[29]. Xxx xxx xxxxx x xxxxxx xxxxxxx xxxxxxx xx xxxx xxxx xxxxx x xxxxxxxxxx xxxxxxxx xxxxxxxxx xx xxxxx xxxxxxxx xxxx. xxxxxxxx x xxx xxxxxxx xxx x (xxxxx xx xxxxx xxxx x xxxxxxxx xxxxxx xx xx xx). xxx xxxxx xxxx xx xxxxxxxxxx xxx xx xxx (xxx x xxxxxx x xxxxx) x xxx x xxx. xx xxxxxxxxxx xxxxxx xxxx xxxx xxx xxxxxx xxxxxxx xxxxxxxxxx xx xxx. xxx xx x xxxxx xxx xxxxx

[28] NTS Response to CenturyLink Data Request
[29] CenturyLink Form AR-13 filed March 30, 2011 with Illinois Commerce Commission

683 xxxxxx xxxxx xxxxx xx xxxxxxxxxx xxxx xxxx xx xxxxxxxxx xx xxxxxx. [End
684 Confidential]
685
686 **Q. Are there any other observations you would like make regarding the AR13**
687 **Report?**
688 A. Yes. It appears that NTS has [Begin Confidential] xx [End Confidential] in
689 Illinois Communications Plant. This is highly troubling on 2 counts. [Begin
690 Confidential] xxxxx,xxx xxxxxxxxx xxxxxxxxx xx xxxxxxxxxxx xxxx xxxxxxx
691 xxxx xx xx xxxxx xxxx xxx xxx xxxx xx xxxxxxx. [End Confidential] Second, it
692 was the desire of Congress and the FCC that CLECs would move towards
693 facility-based competition. It was the FCC who clearly states that prices should
694 reflect a competitive marketplace therefore sending signals to CLECs to either
695 build or lease. Since NTS reports to have made zero effort in building
696 communications plant in Illinois, it is logical to conclude that the prices they are
697 enjoying today are below TELRIC.
698
699 " In the following sections, we first set forth generally, based on the
700 current record, a cost-based pricing methodology based on forward-
701 looking economic costs, which we conclude is the approach for setting
702 prices that best furthers the goals of the 1996 Act. In dynamic competitive
703 markets, firms take action based not on embedded costs, but on the
704 relationship between market-determined prices and forward-looking
705 economic costs. If market prices exceed forward-looking economic costs,

new competitors will enter the market. If their forward-looking economic costs exceed market prices, new competitors will not enter the market and existing competitors may decide to leave. Prices for unbundled elements under section 251 must be based on cost under the law, and that should be read as requiring that prices be based on forward-looking economic costs. New entrants should make their decisions whether to purchase unbundled elements or to build their own facilities based on the relative economic costs of these options. By contrast, because the cost of building an element is based on forward-looking economic costs, new entrants' investment decisions would be distorted if the price of unbundled elements were based on embedded costs. "[30]

Embedded Cost are explicitly excluded from TELRIC

Q. Mr. Miri states that "The TELRIC standard only allows costs necessary to maintain the existing network plant." Is this correct?

A. No, not at all. First, the FCC could not be more clear that the network is to be based upon a lowest cost network configuration and least cost technology. CenturyLink's existing network has been built over time with technology existing at the time it was built. The costs for UNEs are to be forward-looking economic costs. The FCC is clear that embedded costs are not to be considered.[31]

[30] *First Report and Order*, ¶690.
[31] Para 51.505, also see direct testimony for Dr. james Zolneirek, page 5

Q. Does it make any sense that Mr. Miri would propose embedded maintenance costs for TELRIC?

A. No. As shown in my direct testimony, CenturyLink's embedded maintenance cost is [Begin Confidential] xxx xxxxxx xxx xxx xxxxxx xxxx [End Confidential].[32] CenturyLink's embedded investment is [Begin Confidential] xxx xxxxxxx xxxx xxx xxxxxxxx xx xxxxxxxxxxx xxxxxxxxxxxx xxxxxxx [End Confidential].[33]

Q. Please summarize your rebuttal testimony.

A. I have addressed Dr. Zolnierek's concerns about the 12,000 foot CSA design. Specifically:

- The FCC found the 12,000 foot CSA design to be "the most appropriate design guidelines to be used in a TELRIC model"
- The ICC found in two prior dockets that the 12,000 foot design was appropriate.
- I performed several analyses to demonstrate that investment in longer copper loop lengths do not result in any significant lower unit loop costs.
- I explained that CenturyLink's loop model methodology performs an allocation of DLC costs to other UNE loop elements.

I have explained the FCC requirements are very clear that embedded costs are not to be considered in the forward-looking economic cost resulting in the TELRIC of an element.

I have reiterated the efficiencies found in the model methodology of CenturyLink's loop results.

[32] Direct Testimony, Christy Londerholm, page 36
[33] Direct Testimony, Christy Londerholm, page 34

I have addressed Mr. McClerren's comparisons and included more analyses to demonstrate the just and reasonable TELRIC 2-wire UNE rate resulting from CenturyLink's model and study efforts.

I have explained that NTS has exaggerated its claims in Mr. Miri's testimony. I have shown that NTS has very healthy margins today and will continue to have them with the TELRIC 2-wire UNE rate as produced by CenturyLink's model and study.

The 2-wire and DS1 UNE loop rates resulting from CenturyLink's TELRIC model methodology reflect numerous forward-looking efficiencies including network designs, least-cost technology, equipment sizing and pricing, optimal cable routing and scale of construction. This approach fully complies with the FCC pricing requirement that loop rates not exceed the forward-looking economic cost per unit of providing unbundled network loops.

Q. Does this conclude your rebuttal testimony?

A. Yes